

Remarks

Applicants respectfully request reconsideration of the present application in view of the following remarks. Claims 14 and 17 have been amended, claim 15 has been cancelled, and claims 21-28 have been added. Therefore, claims 1, 3-9, 14 and 17-28 are pending in the present application.

Independent claim 14 has been amended to state that the fuel cell sub-assembly module is included in a plurality of fuel cell sub-assembly modules. See *Specification*, pg. 7, lines 20-23; FIG. 6. Claim 14 has also been amended to state that at least one gasket and at least one gasketing element are positioned between at least two of the plurality of fuel cells. See *id.* at pg. 6, lines 14-19; FIG. 5. Claim 14 has been further amended to state that one of the at least one gasket or the at least one gasketing element is cured prior to bonding together at least two of the plurality of fuel cells, and the other of the at least one gasket and the at least one gasketing element is cured during the bonding together of the at least two of the plurality of fuel cells. See *id.* at pg. 5, line 27 through pg. 6, line 3; pg. 6, lines 12-19; pg. 8, lines 5-9.

Claim 17 has been rewritten into independent form and now states in part that the fuel cell sub-assembly module is included in a plurality of fuel cell sub-assembly modules. See *Specification*, pg. 7, lines 20-23; FIG. 6. Claim 17 also has been amended to state that at least one gasket and at least one gasketing element are positioned between at least two of the plurality of fuel cell sub-assembly modules. See *id.* at pg. 7, lines 20-23; FIGS. 5-6. Claim 17 has also been amended to state that one of the at least one gasket or the at least one gasketing element is cured

prior to bonding together at least two of the fuel cell sub-assemblies, and the other of the at least one gasket and the at least one gasketing element is cured during the bonding together of the at least two fuel cell sub-assembly modules. *See id.* at pg. 7, lines 20-23.

Claims 1, 3-9, 14 and 16-19 have been rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent Publication No. 2002/0110720 to Yang ("the Yang reference"). Claim 16 has been cancelled, therefore the rejection of this claim is moot. Applicants respectfully traverse the rejection of the remaining claims.

In order to establish a *prima facie* case of anticipation, each element included in a claim must be disclosed in a single prior art reference. *See W.L. Gore & Assoc. v. Garlock*, 721 F.2d 1540, 220 USPQ 303 (Fed. Cir. 1983), *cert. denied*, 469 U.S. 851 (1984). Therefore, if one of the elements included in the claims are not disclosed in the Yang reference, then the anticipation rejection should be withdrawn.

Independent claim 1 is directed to a method for forming a fuel cell assembly. The method comprises the steps of: a) forming a fuel cell sub-assembly module containing at least two bonded together fuel cell units, the at least two fuel cell units each including an anode, a cathode, and a membrane electrode assembly; b) testing the sub-assembly module; and c) joining together a plurality of sub-assembly modules to form the fuel cell assembly.

The Yang reference does not teach or suggest a method for forming a fuel cell assembly including the step of testing a fuel cell sub-assembly module containing at least two bonded together fuel cell units as recited in claim 1. In rejecting this portion of claim 1, the Examiner made reference to paragraph [0019] of

the Yang reference. See *Office Action mailed August 14, 2008* ("Office Action"), pg.

3. Paragraph [0019] of the Yang reference states that the invention set forth therein includes a "single cell of a [proton exchange membrane fuel cell (PEMFC)] or a unit thereof assembled by a plurality of the single cells" Yang, ¶ [0019]. In other words, this portion of the Yang reference states that the invention set forth therein deals with either a single fuel cell or a plurality of fuel cell that are stacked together to form a fully assembled functional proton exchange membrane fuel cell.

Paragraph [0019] goes on to state that "it is possible to test the efficiency of each cell or unit in advance according to the invention" *Id.* Therefore, in view of the first portion of paragraph [0019] discussed above, this portion of paragraph [0019] states that either a single fuel cell may be tested, or a fully assembled functional proton exchange membrane fuel cell may be tested in advance of incorporating it into its ultimate operating environment. Paragraph [0019] does not specifically disclose a method that includes forming a fuel cell sub-assembly module containing a plurality of fuel cells, wherein the fuel cell sub-assembly module is tested prior to it being joined with another fuel cell sub-assembly module to form a fuel cell assembly, as set forth in claim 1.

For at least the reason set forth above, Applicants submit that the Yang reference fails to teach or suggest all of the limitations included in claim 1. As such, Applicants submit that a *prima facie* case of anticipation has not been established and request that the rejection of claim 1 be withdrawn. As claims 3-9 and 18-20 depend either directly or indirectly from claim 1, Applicants request that the rejection

of these claims be withdrawn for at least the same reason that was set forth with respect to claim 1.

Amended independent claim 14 is directed to a fuel cell assembly comprising a plurality of fuel cells bonded together to form a fuel cell sub-assembly module, wherein the fuel cell sub-assembly module is included in a plurality of fuel cell sub-assembly modules, and wherein the plurality of fuel cell sub-assembly modules are bonded together to form the fuel cell assembly. At least one of the fuel cells includes a bipolar plate assembly and a membrane electrode assembly. At least one gasket and at least one gasketing element are positioned between at least two of the plurality of fuel cells. One of the at least one gasket or the at least one gasketing element is cured prior to bonding together at least two of the plurality of fuel cells, and the other of the at least one gasket and the at least one gasketing element is cured during the bonding together of the at least two of the plurality of fuel cells.

The Yang reference does not teach or suggest a fuel cell assembly wherein one of at least one gasket or at least one gasketing element is cured prior to bonding together at least two of said plurality of fuel cells, and the other of the at least one gasket and the at least one gasketing element is cured during the bonding together of the at least two of the plurality of fuel cells as recited in amended claim 14. In the Office Action, the Examiner cited paragraphs [0015-0017] of the Yang reference to support the conclusion that the Yang reference discloses at least one gasket and at least one gasket element. *See Office Action*, pgs. 4-5; *see also Yang*, FIG. 1. Paragraphs [0015-0017] of the Yang reference relate to the two gaskets (5, 6) that

are shown in FIG. 1 of the Yang reference. From the discussion of the gaskets (5, 6) in paragraph [0013] of the Yang reference, it appears that both of the gaskets (5, 6) are cured prior to forming the fuel cell (1). Neither of the gaskets (5, 6) are described as being cured during the formation of the fuel cell (1). More specifically, Applicants submit that the discussion set forth in paragraphs [0015-0017] does not disclose that one of the gaskets (5, 6) is cured prior to bonding together at least two of the fuel cells (1) and that the other gasket is cured during the bonding together of at least two of the fuel cells (1) as set forth in amended claim 14.

For at least the foregoing reason, Applicants submit that the portion of the Yang reference cited by the Examiner (i.e., paragraphs [0015-0017]) does not disclose all of the limitations that are included in amended claim 14. As such, Applicants request that the rejection of claim 14 be withdrawn.

Amended independent claim 17 is directed to fuel cell assembly comprising a plurality of fuel cells bonded together to form a fuel cell sub-assembly module, wherein the fuel cell sub-assembly module is included in a plurality of fuel cell sub-assembly modules, and wherein the plurality of fuel cell sub-assembly modules are bonded together to form the fuel cell assembly. At least one of the fuel cells includes a bipolar plate assembly and a membrane electrode assembly. At least one gasket and at least one gasketing element are positioned between at least two of the plurality of fuel cell sub-assembly modules. One of the at least one gasket or the at least one gasketing element is cured prior to bonding together at least two of the fuel cell sub-assemblies, and the other of the at least one gasket and the at least

one gasketing element is cured during the bonding together of the at least two of the fuel cell sub-assembly modules.

The Yang reference does not teach or suggest a fuel cell assembly wherein one of the at least one gasket or the at least one gasketing element is cured prior to bonding together at least two of the fuel cell sub-assemblies, and the other of the at least one gasket and the at least one gasketing element is cured during the bonding together of the at least two of the fuel cell sub-assembly modules as recited in amended claim 17. In the Office Action, the Examiner stated that the Yang reference discloses at least one gasket and at least one gasket element, and made reference to paragraphs [0015-0017] of the Yang reference. *See Office Action*, pgs. 4-5; *see also Yang*, FIG. 1. Paragraphs [0015-0017] of the Yang reference relate to the two gaskets (5, 6) that are shown in FIG. 1 of the Yang reference.

Applicants argument is two-fold. First, the discussion regarding FIG. 1 in the Yang reference does not relate to bonding together more than one fuel cell (1) to form a fuel cell sub-assembly module, and paragraphs [0015-0017] of the Yang reference do not disclose bonding together a plurality of fuel cell sub-assembly modules to form the fuel cell assembly depicted in FIG. 2 of the Yang reference. Therefore, Applicants submit that there is no evidence to conclude that the gaskets (5, 6) are disclosed as being used to bond together at least two fuel cell sub-assembly modules as set forth in claim 17.

Second, even if it is assumed that the gaskets (5, 6) may be used to bond together at least two fuel cell sub-assembly modules (which Applicants do not concede), the discussion within the Yang reference in regard to gaskets (5, 6) does

not indicate that one of the gaskets (5, 6) is cured prior to bonding together two fuel cell sub-assembly modules, and the other gasket is cured during the bonding together of the two fuel cell sub-assembly modules, as set forth in claim 17. From the discussion of the gaskets (5, 6) in paragraph [0013] of the Yang reference, it appears that both of the gaskets (5, 6) are cured prior to forming a single fuel cell (1). For at least the reasons set forth herein, Applicants submit that the Yang reference fails to disclose all of the limitations included in amended claim 17 and request that the rejection of claim 17 be withdrawn.

New claim 21 depends from claim 18 and states that one of the at least one elastomeric gasket or the at least one gasketing element is cured prior to bonding together the at least two fuel cell units, and the other of the at least one elastomeric gasket and the at least one gasketing element is cured during the bonding together of the at least two fuel cell units. See *Specification*, pg. 5, line 27 through pg. 6, line 3; pg. 6, lines 12-19; pg. 8, lines 5-9

New claim 22 depends from claim 21 and states that the at least one gasketing element has a thickness of no more than about .005 inches. See *id.* at pg. 5, lines 18-20.

New claim 23 depends from claim 19 and states that one of the at least one elastomeric gasket or the at least one gasketing element is cured prior to joining together at least two of the plurality of sub-assembly modules, and the other of the at least one elastomeric gasket and the at least one gasketing element is cured during the joining together of the at least two of the plurality of sub-assembly modules. See *id.* at pg. 7, lines 20-23.

New claims 24, 25 and 27 depend from claims 23, 14 and 17, respectively, and state that the at least one gasketing element has a thickness of no more than about .005 inches. See *id.* at pg. 5, lines 18-20.

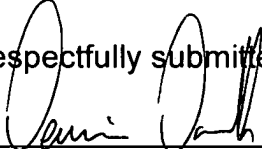
New claims 26 and 28 depend from claims 14 and 17, respectively, and state that the membrane electrode assembly is positioned between at least one of the at least one gasket and the at least one gasketing element. See *id.* at pg. 5, lines 3-7; FIGS. 2, 5.

Conclusion

In light of the foregoing, Applicants submit that claims 1, 3-9, 14 and 17-28 are in condition for allowance and such allowance is respectfully requested. Should the Examiner feel that any unresolved issues remain in this case, the undersigned may be contacted at the telephone number listed below to arrange for an issue resolving conference.

The Commissioner is hereby authorized to charge the \$52.00 fee for the one additional claim in excess of twenty, and any other fee that may have been overlooked to Deposit Account No. 10-0223.

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Respectfully submitted,


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